Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Bozeman Science Video: DNA Replication**  
<http://www.bozemanscience.com/dna-replication/>

(If having issues with the link google “DNA Replication Bozeman Science”)

* 1. What is the location of DNA replication? When does it occur?
  2. Prokaryotes divide by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Where does this occur in prokaryotes?
  3. As DNA is copied it is “semi-conservative” and this was proven by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ experiment. Explain semi-conservative.
  4. What is the structure of DNA?
  5. Describe how DNA “runs” anti-parallel.
  6. DNA replication requires many enzymes. Briefly write the function of each.
     1. Helicase
     2. Single stranded binding enzyme
     3. DNA polymerase
     4. RNA primase
     5. DNA ligase
     6. Okazaki fragment (this is not in the video – look up)
  7. What is the difference in the leading strand and lagging strand?
  8. Describe the difference in eukaryotic DNA replication and prokaryotic DNA replication? (Think structure, location, and origin of replication)